

On Certain *Acanthagrions*, Including Three New Species (Odonata).

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(Plate XVII)

This paper is a brief account of material collected in Guatemala, British Guiana and Trinidad by B. J. Rainey, L. A. Williamson and myself. At Tumatumari, British Guiana, we were aided by Mr. A. F. Porter and Mr. J. M. Geddes; and in Trinidad we enjoyed the frequent companionship of Mr. F. W. Ulrich and Mr. P. L. Guppy.

Pruinescence. It is a matter of common observation that in many agrionines pruinescence appears first on the under parts of the thorax. Pruinescence in certain calopterygines is known to be displayed by the male and it is possible that pruinescence in agrionines may serve a similar purpose. In *Acanthagrion* there are between the first coxae, and probably also between the second coxae, bright shining black areas which, in the case of the first coxae at least, are not covered with pruinescence. These black areas in their white field might be displayed by the male fluttering over the female. However the female is about as definitely marked as the male and the theory of sexual display seems rather improbable unless the female uses the same parts to advertise her sexual maturity. I have not examined species in other genera to see how common this type of ventral coloration is. It may also be noticed in this connection that the lower posterior angle of the thorax is tipped with black and there is a more or less definite dark longitudinal mid-ventral line on the first abdominal segment. These various marks produce a definite and uniform ventral color pattern, the most plausible value of which would seem to have to do with the relation of the sexes.

The Penis. In his study of the penis of Zygoptera Mr. Kennedy has given systematic odonatology a new and valuable tool. Specimens from Trinidad appeared, when judged by conventional characters, to be scarcely distinct from *gracile*. However, there were enough differences to excite suspicion, and when specimens were given to Mr. Kennedy for study,

to our great surprise, he found that the penis of these Trinidad specimens was entirely distinct from that of *gracile*. It is therefore very appropriate that this Trinidad species, the positive recognition of which has been possible only through Mr. Kennedy's work, should be named *Acanthagrion kennedii*.

The mesepisternal fossae. In Plate XVII, figures 10, 11, 12 and 13, I have figured a portion of the right dorsum of the thorax of four females. In these four species there is, on either side of the middorsal carina, and immediately adjacent thereto, and at varying heights on the thorax, a small more or less semicircular depression which, in these species at least, functions as a socket for the reception of half of the posterior dorsal termination of the tenth segment of the male. These depressions have the middorsal carina between them variously modified. As shown by the figures, and as might be expected, the fossae are placed higher on the mesepisterna in *gracile* than in *kennedii* and still higher in *ascendens*. The name, mesepisternal fossae, given to these pits or depressions, has been suggested by Dr. Calvert.

***Acanthagrion kennedii* n. sp.** (Plate XVII, figs. 5, 6, 8, 11).

Abdomen ♂ 24-27, average 25.5, ♀ 24-25; hind wing ♂, 15.5-17.5, average 16.6, ♀ 17-18.

♂.—Genae, labrum and rhinarium green, the rhinarium usually duller than the labrum, and the labrum with an impressed posterior median spot and posterior lateral margins dark brown or black. Nasus black, the extreme posterior lateral corner green. Frons in front with a large quadrangular, slightly oblique bar on either side, varying in color from green to obscure green, yellowish or brownish, and varying also in size, in rare cases reduced and so obscured as to be scarcely evident. Head above black; postocular spots greenish blue rounded, with very little variation in size, about equal to a circle enclosing the ocelli. Rear of head above level of foramen black; below pale, dull or yellowish or greenish tinged.

Front lobe of prothorax pale or yellowish, with a black posterior spot on either side and with the anterior border more or less black; middle lobe black with a variably-sized yellow spot on either side near the lateral margin, this spot never large, reduced to a mere point in many cases, and sometimes wanting; hind lobe black, a small yellowish spot at either extreme end, this spot almost directly posterior to the spot on the middle lobe when the latter is present. Propleuron largely yellowish or greenish, black above.

Dorsum of thorax black, a pale yellow or yellowish blue antehumeral stripe, expanded above at the antealar sinus, then gradually constricted to about one-half the maximum width above, then gradually widening till, at its extreme lower end at the end of the sclerite, it is about three times its width at the narrowest place above; the stripe slightly variable in width in different individuals. A black humeral stripe, wider than one-half the dorsal black, occupying much of the mesepimeron and extended across the mesinfraepisternum, leaving only the lower posterior border of the latter pale; this humeral stripe above notched with pale on its posterior border, and joined along the wing base with a more or less distinct short black spur on the first lateral suture; sometimes this short spur is joined to the humeral suture also across the pale notch in the latter, in which case a pale isolated spot is enclosed. Remainder of sides of thorax pale yellowish or greenish, a black spot above on the second lateral suture which is usually produced as a narrow, sometimes indistinct, stripe on the metepisternum along the second lateral suture, in its maximum development scarcely reaching the level of the mesostigma. A more or less distinct broad greenish or bluish band across the metepimeron parallel and adjacent to the second lateral suture, the posterior triangular area thus marked off being more heavily pigmented and more distinctly yellow than the area anterior to it. Beneath flesh-colored.

Abdomen above black, 1 with apical integument blue; black on 2 more or less narrowed subbasally, at the extreme base expanded laterally as a mere line, widened subapically over an extensive rounded area, in general about as wide as the pale sides and as the black on 1; 3-7 with narrow basal pale rings or spots; 7 apically blue beyond the row of spines in every case and in many cases an equal area basal to the spines also blue; 8-9 blue; 10 black. Sides of 1 and 2 with lower two-thirds greenish, posterior border of 1 black; base of 3 greenish, fading out posteriorly into yellowish which reaches about mid-height, expanded basally to form the basal ring, and constricted apically by the expanded dorsal black which, at the extreme apex, reaches the lower edge; 4-7 similar but yellowish, with little or no bluish or greenish, at the base of each, and with the paler lateral area progressively narrowed by the widened dorsal black which reaches a maximum on 7; 8-9 blue; 10 black, beneath yellowish brown. Appendages black, inferiors yellowish brown at base.

Legs yellowish brown, femora black on the superior surface, increasing apically where the black surrounds the femur, more extensive and intense in some individuals than in others but in all darkest on the first femora and palest on the last; first tibiae, and second more or less, black-lined on anterior face, the line tending to break into a series of connected spots; tarsi varying from brown, with apices of joints dark, to largely dark; tooth on tarsal claw similar to *gracile*.

Wings hyaline to slightly brown tinged; stigma black, shorter than I have seen in *gracile*.

♀.—Labrum yellowish brown, darker at base, shading out insensibly to the pale lower border. Genae, rhinarium and frons in front olive, the two latter the darker, the frons sometimes dark reddish brown. Nasus black, one specimen with an obscure spot on either side. Frons in front with the pale areas, as compared with the male, generally greatly more extended with the result that in some cases the black is reduced to a longitudinal median stripe, wider above and below. Head above as in the male with the postocular spots more bluish; in some cases there is on either side a small round brown spot just behind and external to the antenna, and indistinct areas of the same color in front of the median ocellus.

Prothorax similar to male, but pale color bluish.

Thoracic pattern similar to male, but pale blue replacing the yellowish colors of the latter, except in the posterior triangular area of the metepimeron which is more or less distinctly yellowish. Metepisternum from the wings to slightly below the level of the stigma is a darker blue than the color which bounds it on both sides and below (in the male the corresponding area is more or less slightly more green than the surrounding areas).

Abdominal segments 1-7 similar to male; 8 black (pale basally on either side in one case), apex pale beyond the spines (and in one case for a distance anterior to the spines equal to about one-half the part posterior to the spines); 9 with apical half or two-thirds blue, this blue encroaching on the black in a large quadrangular median spot which reaches the base of the segment or is separated therefrom by a narrow transverse line of black; 10 blue. Seen from the side similar to the male but with blue or bluish replacing green; 8 in one specimen with a blue basal spot as described in dorsal view, in others black, the narrow inferior yellowish margin slightly widened basally; 9 with the blue appearing as a large distal superior triangular spot, the base of the triangle on the apical border of the segment, extreme lower margin of segment yellowish; 10 blue, lower half paler and duller. Appendages black. Vulvar spine large, black tipped.

Legs as in male, but black greatly reduced especially on parts distal to the femora.

Wings as in male, but stigma light brown.

Trinidad, 1912: Cunapo River, Feb. 27, 10 ♂, 1 ♀; Arima, March 4, 15 ♂, 1 ♀; Cumuto, March 6, 8 and 10, 88 ♂, 8 ♀; *types* a ♂ and ♀, Cumuto, Trinidad, March 10, 1912, in the writer's collection. Named for Mr. Clarence Hamilton Kennedy in recognition of his work on Zygoptera penes which has made the recognition of this species possible.

Males of this species were sent to Dr. Calvert and Dr. Ris. Dr. Ris writes, "It is almost exactly similar to a few *Acanthagrions* taken by myself in Bahia in 1890; I have considered them nearly typical *gracile*." Dr. Calvert says, "It is nearer *gracile minarum* than no. 2 (*indefensum*) is. I am inclined to so consider it; almost the only objection is the presence of black stripe on second lateral thoracic suture." In view of these opinions any comment on the difficulty of recognizing this species is superfluous.

In Calvert's key to the males of *Acanthagrion* of the *gracile* group (Od. Neotrop. Reg., Ann. Carnegie Mus., Vol. VI, pp. 161-2) *kennedii* will run out to *gracile* or *g. minarum*. *Minarum* was described by de Selys from material from Minas Geraes. It is possible it may prove to be specifically distinct from *gracile*, but there is no reason to think it is the same as the species here described from Trinidad. *Vidua* de Selys, from Venezuela, might possibly be expected in Trinidad, but it is not represented in the material before me unless *ascendens* should turn out to be a synonym, which I think is improbable.

Compared with material from Guatemala determined by Calvert as *gracile*,* males of *kennedii* differ in the blue color of the head, thorax and basal abdominal segments of *gracile* being replaced by green and yellowish, thus approaching *ascendens*. A comparison of the descriptions will show that black is more extensive on the head and thorax of *kennedii* than of *gracile*. In posterior views of the male appendages, the superior appendages of *gracile* are seen to be longer (higher) with the superior rounded angle reaching well above the constriction in the dorsal elevation of segment 10; in *kennedii* the appendages reach this constriction but do not extend above

[*Since this paper was written, a study of the penes of specimens in the Cornell and Harvard collections has brought to light two more species included under the name *gracile*. As both are from Brazil it may be that one or the other of these will be found to agree with the type of *gracile* in the Selys collection. Neither of these Brazilian species are described or figured in Mr. Williamson's article or in my own in this number of the NEWS.—C. H. KENNEDY.]

it. Venational differences may be noted in the tabulation which closes this paper, especially the more apical position of the arcus and of vein A and the larger number of post-nodals in *kennedii*.

Like *ascendens* (see *postea* under that species) the female of *kennedii* runs out to C, under B, under A. As might be expected the mesepisternal fossae of *kennedii*, corresponding to the shorter (lower) appendages and the less elevated tenth segment of the male, are placed lower on the sclerites than in *gracile*. It is possible the form of the mesostigmal lamina may be of value in separating the two species. As in the male, the female of *kennedii* has much more black than the female of *gracile*; for example *gracile* has the nasus largely pale and the dorsum of the head more extensively pale-marked, and the dark markings on both thorax and legs are reduced in extent as compared with *kennedii*; in *gracile* in some cases abdominal segment 8 in side view is largely pale, the black occupying the upper third of the segment for about two-thirds its length from the base; in those cases where the black is more extensive and reaches the apex of the segment the inferior yellowish border is fully twice as wide as it is ever found in *kennedii*; segment 9 is similarly conspicuously paler in *gracile* and even in the darkest examples the superior apical blue area posteriorly blends insensibly below into the pale inferior margin which is much wider than in *kennedii* where the posterior triangular blue spot is definitely separated by dark from the narrow inferior pale margin.

Fortunately we took a large number of this difficult species, and this material will be so distributed as to give students generally an opportunity to know the species from specimens as well as from my description. It is to be hoped for the sake of convenience that definite characters, in addition to those of the penis, may be detected. Much of this material was collected at the small swamp at Cumuto where we took three species of *Metaleptobasis*, a new *Telagrion*, and many other things (see *Notes on Neotropical Dragonflies*, Proc. U. S. Nat. Mus., Vol. 48, 1915, p. 601).

Acanthagrion indefensum n. sp. (Plate XVII, figs. 3, 4, 7).

Abdomen ♂ 23; hind wing ♂ 15-15.5.

♂.—Similar to *kennedii* and *gracile* but smaller; like *kennedii* as described except as noted below; one specimen with a large blue spot on either side between the apex of the second joint of the antenna and the eye, and a small obscure yellowish spot on either side just inside the first joint of the antenna, the blue postocular spots in this specimen much larger than in the other specimen where they are about the size of the spots in *kennedii*, and in both specimens the postocular spots are irregular lobate in outline as contrasted with the entire outline of *kennedii*. Rear of head above, about foramen, and below adjoining mouth parts, black, thus differing from both *gracile* and *kennedii* which are pale below.

Prothorax black, thus darker than in *kennedii*; front lobe with a median bright blue spot. Propleuron below dull or leaden blue.

Thoracic pattern similar to *kennedii* but clear blue replacing the yellow or yellowish-tinged parts of *kennedii*, in which character *indefensum* is like *gracile*. The black stripe along the second lateral thoracic suture is more definite and more intensely black than it ever attains in *gracile* and as it very rarely attains in *kennedii*.

Abdominal segment 1 variable; in one specimen the dorsal black, which is about as wide as in *kennedii*, fails to reach the apical integument by a distance equal to the length of this integument, that is, the black is a quadrate basal spot; in the other the black is narrowed apically, but reaches the blue integument, and there is a median blue spot which is contiguous posteriorly with the integument. Sides of 1 and 2 blue, instead of green or greenish, thus again resembling *gracile*. Remainder of abdomen like *kennedii* with apical integument only of 7 blue.

Legs much darker than in *gracile* or *kennedii*; first femora entirely black except the base on the inner surface; on the second femora the pale basal color on the inner surface not quite reaching the middle of the femora; the third femora still paler, with a pale line on the anterior dorsal surface, this pale line broader basally and disappearing before the apex where the femur is completely circled with black, the inner surface otherwise pale; first tibiae with anterior dorsal surface black; second and third tibiae black at base and apex; tarsi black, claws dark amber, darker than in related species, toothed as in *gracile*.

Wings hyaline; stigma black, similar in shape to *kennedii*.

Wismar, British Guiana, Feb. 16, 1912, two males in my collection.

One of the specimens was sent to Dr. Calvert who writes, "Most like *A. gracile minarum* of anything I know but ab-

dominal segment 10 not so elevated, superior appendages not so high, and an additional black stripe on the second lateral thoracic suture." Of the four related species of the *gracile* group considered in this paper, *indefensum* has the lowest tenth abdominal segment, and the superior apical apex is strikingly rounded as compared with the others. It will be interesting to know the female of *indefensum* and to note what modifications of the middorsal thoracic carina between the mesepisternal fossae have taken place. May it not be expected that here the carina will be indented rather than elevated as it is in *ascendens*? In spite of its close resemblance to *gracile*, I believe that this species offers no such difficulties as *kennedii*, since the appendages are strikingly different from its closer allies. These differences, however, are concerned with parts of inferior appendages which have received little attention. In many genera of Agrionines the inner posterior surface of the inferiors are variously modified, the most common form being a dorsally directed, acutely tipped, tubercle. These parts are concealed in lateral views, and are inconspicuous and usually neglected in dorsal views. In *kennedii* and *gracile* the inner face of each inferior appendage is produced in a great flattened, inward curved, obtuse tubercle; in *indefensum* this is reduced to a small inconspicuous prominence; the appearance in posterior view of the apex of the abdomen of *indefensum*, as compared with *gracile* and *kennedii*, has suggested the specific name (see figs. 7, 8 and 9, Plate XVII).

On February 16, my father and I collected near the canal and government sawmill at Christianburg about a mile below Wismar. A short distance above the sawmill a dressing room for bathers is located. We collected in brush on the right bank of the canal below this dressing room, and along a small stream on the left side of the canal, parallel to and only a short distance from it, in the brush. My notes fail to show just where the two specimens of *indefensum* were collected.

Acanthagrion adustum n. sp. (Plate XVII, figs. 1, 2, 10).

Abdomen ♂ 21-22.5, average 21.95, ♀ 21-22; hind wing ♂ 14-15, average 14.75, ♀ 16.

♂.—Genae light orange. Labrum light orange to dark orange or obscure reddish brown, narrowly black at base and on posterior lateral borders with a basal median black impressed spot. Rhinarium slightly darker than labrum. Nasus rarely entirely black, usually a median transverse orange bar, sometimes this larger with margins orange, except at base, thus reducing the black to a submarginal black ring. Frons in front light orange to obscure reddish brown, naso-frontal suture black, wider in the median line which is produced posteriorly in a more or less distinct narrow longitudinal black line which joins a distinct short transverse crescent-shaped black area of varying width lying in front of the median ocellus, and between the antennae from which it is separated by about its own length. Color of head above very variable in the extent of black; in the palest there is a short oblique black line on either side of the median ocellus and a median triangular black spot back of it; starting posterior to the lateral ocellus a suture-like line runs outward and forward to the eye which it meets on a level between the antenna and the median ocellus; anterior to this line all is slightly dull reddish orange with the restricted black markings above described, and posterior to this line the dorsum is solid black except for the large isolated postocular orange spots, and a narrow orange edging on the occiput. In darker specimens the ocelli are surrounded by black with a small orange spot in front of each lateral ocellus; from the black spot about the median ocellus a short bar runs outward and forward on either side toward, but not reaching, the antenna; the inner face of the second joint of the antenna is black, and posterior to this joint a short rounded bar runs toward, but does not meet, the eye; posteriorly from this bar, on a line with the antenna, there is a more or less distinct black connection with the large posterior black area. In the maximum development of black this becomes a wide black bar; the bar from the median ocellus reaches the antenna; midway it sends off an anterior branch which runs forward and inward to spread out and fuse with the black anterior to the median ocellus and the median transverse black bar on the frons; this above described anterior branch also near its middle throws off an anterior branch which runs outward and forward to the angle of the frons, then outward and backward across the first joint of the antenna to the inner face of the second joint. The orange or reddish brown postocular spots vary in size from as small as the area within the ocelli to fully twice this diameter when the lateral and posterior margining black is narrow, but in every case the spots are completely surrounded by black. Rear of head black, yellow margined against the eyes.

Prothorax with front lobe orange, more or less black posteriorly on either side; middle lobe black with a geminate median orange spot

of varying size and, on either side, an orange spot of varying size, in some cases large and conspicuous, and in some cases entirely wanting; the difference between extreme cases, as in the case of the head markings, is striking; hind lobe largely orange or this reduced to the extreme posterior edge and divided in the median line by black. Propleuron black above, yellow below, less variable than the median lobe.

Thorax above orange or reddish brown; on either side a straight black stripe, about two-fifths the width of the mesepisternum, separated by a pale median stripe starting at the antealar sinus and widening uniformly below, variable, scarcely more than a line in some cases and, in others, at about its mid length, almost half the width of the adjacent black stripes. A posthumeral stripe, slightly wider than the black stripe on the mesepisternum, entirely black in the brightest colored specimens, in others fading out along its posterior border, the black above and below being most persistent with the intermediate black reduced to the anterior line at some points; this posthumeral stripe continued across the mesinfraepisternum which is yellow in about its lower half. A black spot on the second lateral suture above, continued below in most cases as a black or brownish stripe lying on the anterior side of the suture, this stripe varying in width from the merest line to about one-half the width of the dorsal black stripe, and, in its extreme length, almost or quite reaching the metastigma. Metepisternum pale yellow and dull orange or orange brown in irregular pattern, in some cases the darker color is almost exclusively present, in others it is confined to the median and posterior portions of the sclerite. Metepimeron with a wide stripe of pale yellow parallel to the second lateral suture, the posterior triangular area dull orange. Metinfraepisternum pale dull yellow, narrowly black above. Beneath posterior to coxae dark colored or black, early becoming pruinose, orange brown adjoining the abdomen.

Abdomen above black, 1 and 2 usually with purplish reflections, the others with greenish reflections; apical integument of 1 pale blue; 3-8 with small basal, pale blue or green spots or rings; on 8 these spots are small, bright blue, and widely separated by the median black, not always present or, at least, not evident, in dried material; apical fourth to three-fifths of 8 and all of 9 bright blue, the blue on 8 indenting the black in the middorsal line in a more or less triangular area, the apex directed anteriorly; 10 black. Sides of abdomen pale, in the brightest-colored specimens bluish or greenish yellow on 1 and 2, and the base of 3, then yellow on 3-7, 8-10 bright blue; apical edge of 1-6 narrowly dark or black ringed; pale sides of 2-7 continuous with the basal rings or spots, apically on each segment the dorsal black widens and, with the apical black ring, separates the pale area

of one segment from the succeeding segment; seen from the side the blue and black of 8 are about of equal width, the black descending possibly a little more than half way, and there is a very narrow apical black ring; on 10 the dorsal black is extended narrowly on the sides of the segment at the base, reducing the blue to a large apical spot, beneath dull yellowish brown. Superior appendages black, sometimes brown on their posterior face, the apical inner angle with a minute acute spine; inferiors dark brown or black, pale at base and below.

Legs brown, coxae black-spotted in front at the base; femora dark on the superior face, increasing apically where the black surrounds the femur, the first femora the darkest, the last the palest, and varying in individuals; when reduced tending to break up basally (where it first disappears) into spots; tibiae with their anterior dorsal face black-lined, darkest on first tibiae, least developed on the last; tarsi black; tooth on tarsal claw as in *gracile*, possibly very slightly less developed.

Wings hyaline; stigma orange or reddish brown, conspicuous in color to the unaided eye.

♀.—Similar to the male, slightly duller and darker and with the black markings reduced. Genae lighter, light yellowish brown. Apparently as variable as the male in the color pattern of the head and thorax; the posthumeral black stripe noticeably more reduced than in the male, the upper and lower ends distinct but the intervening space represented by the merest black line or an indefinite row of disconnected obscure dark markings. On the metepimeron the distinction of pale yellow and dull orange is not so well marked.

Abdomen above black with greenish reflections, most marked on the proximal segments and completely disappearing on the distal segments; 3-6 with narrow basal rings or spots, slightly duller than in the male and with the pattern less definite; 7 with basal ring scarcely evident, and no trace on 8 of the basal blue spots often present in the male; extreme apex 7-9 blue; 10 blue except a small narrow triangular median black spot, the base of the triangle on the base of the segment. Sides similar to male; 8 with the entire lower edge narrowly yellowish; 9 apically at midheight with a large indefinite blue or yellowish area; 10 with the black on dorsum produced laterally narrowly along base, the sides bright blue, yellowish below; the restricted dorsal black results in 10 being much paler in the female than in the male, in contrast with 8 and 9 which are much darker in the female than in the male; appendages black. Vulvar spine large, black tipped.

Legs as in male. Wings hyaline; stigma pale brownish yellow.

Wismar, British Guiana, January 30, Feb. 15 and 16, 1912, 20 ♂, 2 ♀; types ♂, ♀, Feb. 15, in the writer's collection.

The specific name is suggested by the prevailing pale colors of the head and thorax giving the insect a brownish or sun-burned appearance.

Males of this species were sent to Dr. Calvert and Dr. Ris. Dr. Calvert writes, "I do not know it." Dr. Ris says, "It is unknown to me and I cannot identify it with any of the described species; note its long feet and comparatively long spines." In Calvert's key to male *Acanthagrion* of the *gracile* group (Odonata Neotropical Region, Ann. Carnegie Museum), *adustum* might run out to C, p. 161, or CC, p. 162; if the latter, it is separated at once from *truncatum* by the form of appendages, the basal black of abdominal segment 8 of *adustum*, and many other characters, noting especially the yellow colors of *adustum*. If run out to C, p. 161, it would go in the key to HH, under which two varieties of *gracile* are distinguished; *adustum* is separated at once from these two by having the basal two-fifths to three-fourths of segment 8 black (blue in others) and by the yellow coloration of head and thorax of *adustum*. In de Selys' arrangement (Le Grand Genre Agrion, 1876), *adustum* properly belongs in his *première section*, though, so far as the origin of A with reference to the cubitoanal crossvein goes, some of the wings are as described in his *seconde section*, a section, however, recognizable by other characters; *adustum* belongs to the *gracile* group, under de Selys' *première section*, running out to *temporale*, from which species it is separated at once by the postocular spots not continuous with the rear pale color of the head (as in *temporale*) and by the extensive black on segment 8 in *adustum* (blue in *temporale*).

In Calvert's key to female *Acanthagrion* (loc. cit., p. 162), *adustum* might run out to B or BB; in either case it may be recognized by having abdominal segment 9 black, 10 largely blue, pale colors of head and thorax largely yellow or yellowish, not blue.

This species flew with *Enallagma*- or *Ischnura*-like flight in the vegetation bordering the canal along its left bank just above the sawmill at Christianburg, a mile below Wisnar.

(To be continued)

